WHAT IS CLAIMED IS

1. A variable optic attenuator comprising:

a chassis defining a channel extending in a first direction;

an attenuating device movably received in the channel, the attenuating device comprising a filter having a density varying from a low density region to a high density region in a filter moving direction that is substantially parallel to the first direction;

a driving unit mechanically coupled to the attenuating device for reciprocally moving the filter in the filter moving direction;

a mount attached to the chassis, the mount forming first and second primary bores extending parallel to the first direction and located on opposite sides of the channel, and a passage extending across the channel in a second direction perpendicular to the first direction and intersecting the first and second primary bores, the mount forming first and second flat surfaces at the intersection of the passage with the first and second primary bores, the surfaces being 45 degree inclined with respect to the first direction and perpendicular to each other, first and second reflectors being attached to the first and second flat surfaces of the mount;

wherein the filter is located in the passage and thus between the reflectors, the movement of the filter by the driving unit bring different regions of the filter to the passage; and

wherein the first and second bores primary are adapted to receive and retain ends of input optic fiber and output optic fiber, an

optic signal transmitted through the input optic fiber is incident to the first reflector through the first primary bore and is then reflect to pass through filter along the passage toward the second reflector which reflects the signal to the output optic fiber through the second primary bore thereby forming a U-shaped optic path between the input and output optic fibers.

2. The variable optic attenuator as claimed in Claim **1**, wherein the attenuating device comprises a carrier to which the filter is attached and wherein the driving unit comprises an electric motor drivingly coupled to the carrier for reciprocating the filter in the filter moving direction.

3. The variable optic attenuator as claimed in Claim **2**, wherein the coupling between the motor and the carrier comprises a threaded shaft rotated by the motor and an inner threading formed in the carrier, a threading engagement being formed between the threaded shaft and the threading of the carrier.

4. The variable optic attenuator as claimed in Claim **2**, wherein the driving unit comprises electric control means comprising a variable resistor, a conductive member being attached to the carrier to be movable therewith, the conductive member having a spring arm physically engaging the variable resistor to generate a feedback signal to the electric control means.

5. The variable optic attenuator as claimed in Claim **2**, wherein the carrier defines a guide groove slidingly and receivingly engaging a guide rail formed inside the channel of the chassis.

6. The variable optic attenuator as claimed in Claim **1**, wherein the chassis forms platforms on opposite sides of the channel for supporting the mount with the first and second primary bores of the mount located on opposite sides of the channel.

7. The variable optic attenuator claimed in Claim **4**, wherein the electric motor is a stepping motor in connection with the electric control means, the feedback signal being fed to the electric control means for controlling the stepping motor.

8. The variable optic attenuator as claimed in Claim **1**, wherein the reflectors comprise mirrors attached to the flat surfaces by adhesives.

9. A variable optic attenuator comprising:

an attenuating device comprising a filter movable in a longitudinal direction;

an electric control unit drivingly coupled to the attenuating device for reciprocally moving the filter in the longitudinal direction; and

an optic module comprising a mount having two reference surfaces perpendicular to each other, two reflectors securely attached to the reference surfaces, the mount further defining two parallel primary bores adapted to receive and retain input and output optic fibers in precise alignment with the reflectors, a passage being formed between the reflectors

and extending in a lateral direction not parallel to the primary direction and through the filter whereby the primary bores, the reflectors and the passage form a substantially U-shaped optic path between the input and output fibers.

10. The variable optic attenuator as claimed in Claim **9**, wherein the attenuating device comprises a carrier to which the filter is attached, and wherein the electric control unit comprises a stepping motor drivingly coupled to the carrier for moving the filter in the longitudinal direction.

11. The variable optic attenuator as claimed in Claim **10**, wherein the stepping motor comprises a threaded output shaft extending in the primary direction and threadingly engaging with an inner threading of the carrier for moving the carrier and the filter in the longitudinal direction.

12. The variable optic attenuator as claimed in Claim **9**, wherein the electric control unit comprises a variable electric resistor and wherein the attenuating device comprises a slider electrically and movably engaging the variable electric resistor for generating a feedback signal to control the stepping motor.

13. The variable optic attenuator as claimed in Claim **10**, wherein the optic module having a wall to which the motor is attached, a though hole being defined in the wall for extension of the threaded shaft of the motor.

14. The variable optic attenuator as claimed in Claim **9**, wherein the attenuating device forms a guiding groove and wherein the optic module comprises a guide rail movably received in the guiding groove for guiding the reciprocal movement of the attenuating device.

15. The variable optic attenuator as claimed in Claim **9**, wherein the optic module comprises first and second platforms for supporting the mount.

16. The variable optic attenuator as claimed in Claim **9**, wherein the mount defines a channel between the primary bores with the attenuating device movably received in the channel.

17. The variable optic attenuator as claimed in Claim **16**, wherein the passage consists of first and second secondary bores defined in the mount, aligned with each other and respectively located on opposite sides of the channel.

18. The variable optic attenuator as claimed in Claim **9**, wherein the reference surfaces are 45 degree inclined with respect to the primary bores and the passage.

19. The variable optic attenuator as claimed in Claim **9**, wherein the reflectors comprise mirrors attached to the reference surfaces by adhesives.

20. An optic module comprising:

a chassis;

a mount disposed in on portion of said chassis, said mount defining parallel first and second primary bores extending along a first direction

with a channel therebewteen, a passage extending cross the channel in a second direction perpendicular to said first direction and intersecting the first and second primary bores, a pair of reflectors respectively located at an intersection of the first and the second primary bore and the passage, each of said reflectors facing to the corresponding primary bore and the passage at forty five degrees;

a carrier movably mounted in the other portion of said chassis along said first direction, said carrier bringing a filter intersecting said passage; and

an electrical resistor disposed in the chassis engaged with a slider which moves along with the carrier.